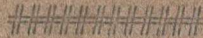


UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE

R E P O R T S

NIRA INSECT CONTROL PROJECT

BADGER WELLS UNIT



ECW INSECT CONTROL PROJECT

HACKAMORE

1933-1934



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Nira - Modoc
Insect Control
Badger Wells Unit

Alturas, California
March 20, 1934

R E P O R T

ON

NIRA INSECT CONTROL PROJECT

BADGER WELLS

Season

1933 - 1934

FORWARDED Lester W. Hodson

Nira
Insect Control Project
Badger Spring Unit

Alturas, California
March 20, 1934

During the summer of 1933, a pine beetle cruise was conducted by the U. S. Bureau of Entomology from various BCW Camps. One such crew was employed at Hackamore P-3. This crew gathered data for the Bureau of Entomology on the 1932-33 freeze and also cruised various sample plots to determine the extent of the new infestation of 1933.

It was found from this cruise that the mortality due to the 32-33 freeze was very high, but as the cruising progressed during the summer, it was also found that the infestation was once more on an upward trend. In the fall of 1933, the Bureau of Entomology recommended that traverses be run through areas not represented by sample plots. These cruises showed enough infestation to warrant control work.

The Bureau of Entomology laid out a control area consisting of 24,000 acres, located in Townships 43 and 44 N., and Ranges 7 and 8 E., M.D.M. Later on, in the season, the area was enlarged, with the approval of Dr. Salmon, to take in some fringe type timber lands lying on the west and north sides of the original project area. This additional acreage brought the total project area up to 26,945 acres.

The U. S. Forest Service allotted \$12,000 toward the project from NIRA funds and all possible haste was made to organize a camp. Use of the Pickering portable mill as a base camp was secured and it was agreed that 30% of all area controlled would consist of Pickering timber lands. In order to comply with this agreement made with the Pickering Company, the NIRA project had to be combined with the BCW project in order to show enough acreage. The combined projects consisted of 43,255 acres, of which 13,960 acres were on Pickering Lumber Company lands. This takes care of the 30% asked by them, for the use of their portable mill as a camp site.

The project laid out by the Bureau of Entomology included privately owned lands as well as government. Of the entire project, 5,480 acres belonged to the Pickering Lumber Company, and also, 4,040 acres were Red River Lumber Company lands. The amount of work accomplished on all private lands will appear in tabulated form later in this report.

To comply with the NIRA code, all men paid over 75¢ per hour, except cooks, assistant cooks and straw bosses were appointed from Civil Service register. This of course involved spotters. The wage schedule was as follows:

Cook (head)	1.10	per hour	Head Spotter	\$2,600	per annum
Cook (second)	.75	" "	Foreman	2,600	" "
Saw filer	1.10	" "	Ass't. Spotters	1,620	" "
Truck Driver	1.10	" "			
Straw boss	.75	" "			
Labor (Treater, Etc.)	.55	" "			

Board was set at 25¢ per meal, or 75¢ per day.

It was proposed at first that head fallers be paid at \$1.10 per hour but as each treating crew was a set of fallers in itself, it would mean that nearly every man would come under the rating as faller. However it was finally decided through correspondence with the Regional Forester that there be no distinction between fallers, and the wage scale for treaters (fallers) was set at 55¢ per hour.

The maximum working hours were 40 per week and a ruling made by the local Forest Service set the maximum hours per month at 160. This distributed the time more equally among the employees and worked out better for all concerned. As the men were worked by eight hour days, this meant that there were only 20 working days per month for laborers. The full crew number 31 men. Men paid on the monthly basis of course worked 44 hours per week. These high wages would naturally tend to show a higher cost of control, per tree and per M board feet than on previous control projects.

On October 23, 1933, a small crew was put to work clearing up the mill site and making it ready for occupancy. The spotting started at the same time in order to permit them to keep far enough ahead of the treaters so that all phases of the work could be carried out most advantageously.

Control work was in full swing by November 6th. Most of the treaters were experienced men from former control projects. However, several men who were new to the work had to be broken in. Therefore it was a matter of two weeks before the crews were definitely organized. Three man crews were used during November due to the continued dry spell. Each tree had to be trenched and watched, but as soon as the weather permitted the crews were divided into crews of two men each.

It has been found in the past that the three man crew cannot equal the two man crew, as far as output per man-day is concerned. Two men working together will adjust their work to each other until they are functioning efficiently, while the third man in a crew never seems to fit in and often retards the work of one of the other men in the crew. There are times when the third man is necessary however, such as in bad fire weather, or where control work is carried on in

deep snow, where he can be kept busy removing the snow and tending to the burning. However, the weather of this winter was ideal for control operations, there being hardly any snow at all.

As the work progressed through the winter it was seen that the allotment of \$12,000 would not be sufficient to finish the project. Therefore, the Forest Service allotted an additional \$4,000, making a total project fund of \$16,000. Work then was carried on till March 6, 1934, when the last tree was felled and the project completed.

Composition of Brood

This composition was taken from 3,568 tree forms on the entire project. Records show that the Western Pine beetle, (*Dendroctonus Brevicornis*) was the most active. The Flathead Borer (*Melanophila* sp.) also played a prominent part in the fringe type timber towards the west. A very large percentage of the broods were mixed, but the Western Pine Beetle played a large part in these mixed broods. The composition worked out on a percentage basis shows as follows:

<u>Insects</u>	<u>Percent Total Infestation</u>
<i>Dendroctonus-brevicornis</i> - - - - -	35.1
<i>Dendroctonus-monticolae</i> - - - - -	13.7
Flathead borer - - - - -	12.4
Mixed broods - - - - -	38.8
Total	100.0

Control Methods Used

A spotting crew of one compassman and three spotters ran ten chain strips through every section, making a 100% cruise as they went. The regular peeling and burning method of control was used by the treaters and special care was taken to keep the tree off the ground in order that the bark on the under side might burn. The limbs were all removed and carefully piled on the log and burned.

One man acting as straw boss spent all his time among the various treating crews and saw to it that an excellent job was done on each and every tree. He was an experienced man at insect control work and it was his duty to inspect every tree felled, and he helped to keep the crews lined out and in order.

Averages

Of the forty one sections controlled, figured on an acreage basis, the following averages are shown:

Trees per section - - - - -	87
Diameter per tree - - - - -	27.4 inches
Number of logs per tree - - - - -	3.94
Volume per tree - - - - -	984 B. F.

Amount of Work Accomplished

Spotting Results

	Trees	Volume	B. F.	Acres
U. S.	1,897	1,919,020		17,425
Pickering	649	651,480		5,490
Red River	1,022	940,390		4,040
Total	3,568	3,510,890		26,945

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Trees per man day (Treating)	2.56
Acres " " (Spotting)	70.1 approx.
Trees " " (Spotting)	0.3

Costs of Work

Salaries & Wages (All workers)	Subsistence Supplies, (Food only)	Trans- portation	Other	Total
Gross : Board : Net				
14,376.35 : 2038.50 : 12,345.85	2,089.04	305.06	441.89	15159.1
Cost per man day 4.534	.752	.112	.182	5.58

Average Costs

Per Tree Spotted (Labor only)	.64	Per Tree Treated	4.248
" M.B.F. "	.65	" M.B.F. "	4.317
" Acre "	.086	" Acre "	.56
" Man day "	5.16	" Man day Total labor	5.56

Cost per meal served including non-revenue .24

LABOR AND COST DISTRIBUTION

	GROSS	BOARD	NET	MAN-DAYS	COST PER MAN-DAY
Supervision and Accounting					
Salaries and Expenses	2,215.92	210.75	2,005.17	328-7/8	6.09
Subsistence					
Salaries and Supplies	3,341.54	139.75	3,201.79	169-1/2	18.889
Spotting					
(Wages only)	2,296.77	249.00	2,047.77	445	4.601
Treating					
(Wages only)	6,576.90	1,221.00	5,355.90	1494-3/8	3.583
Transportation					
(Wages and Supplies)	1,146.65	66.50	1,080.15	100	10.801
Equipment					
Wages and Supplies	956.54	75.75	880.79	92	9.573
Miscellaneous					
Wages and Supplies	658.31	70.75	587.56	93-1/4	6.301
Totals -	17,192.63	2,033.50	15,159.13	2723	5.56

ECW - Medec
Insect Control
Hackamore P-3

Alturas, California
March 20, 1934

R E P O R T

ON

ECW INSECT CONTROL PROJECT

HACKAMORE

Season
1933 - 1934

Camp Superintendent _____

ECW - Modoc
Insect Control
Hackamore P-3

Alturas, California
March 20, 1934

While the Bureau of Entomology was laying out the NIRA insect control project, they also laid out a control area for the enrolled men at Hackamore Camp P-3. This work was to be done during the winter of 1933-34.

The area to be controlled was located near the Hackamore camp and joined the NIRA project on the south and west sides. It consisted of 15,320 acres and took in timber lands of various ownerships, chiefly Pickering Lumber Company and Red River Lumber Company.

The control work was a big undertaking as all the enrolled men were new to insect control work. The work naturally called for axemen and fallers and the experience of most of the men was limited along these lines. It is true, however, that some of them had developed into good woodsmen during the summer months, but the bulk of them had to be trained in the use of axe and saw.

Experienced spotters were secured and paid at the rate of \$120 per month. A deduction of 15% was made on the salaries of all men except those enrolled to comply with the Economy Act.

The spotting crew consisted of four men and they employed the same methods of spotting as were used by the NIRA spotting crew. The head spotter from the NIRA crew offered these men part time supervision.

CONTROL METHODS

Each foreman was placed in charge of from 30 to 50 men but this number of course varied from day to day. He divided the men into crews of 2 to 6 according to their efficiency. Some needed more supervision than others. Instead of giving each crew a strip to work by themselves, the foreman lined out their work during the day and kept them pretty much in a bunch, in order that he might oversee their work better. The foremen who were in charge of these men, were excellent woodsmen and had years of experience at insect control work. The maximum number of men employed at any one time was 80 men.

The men were worked 6 hours a day on the job and five days a week. There were days, of course, when they could not deliver a full

six hours work, due to the conditions of roads to and from the job.

The regular peeling and burning method was used and all limbs were disposed of by piling them on the log and burning them.

A daily progress record was kept in camp but all tree records and forms were sent to the Bureau of Entomology as the project sections were completed. For this reason no composition of breed can show in this report and the distribution of volume and trees as to various ownerships must be made approximately. The totals as to acreage and volume will be correct as they were taken from daily progress records at Hackamore F-S.

Subsistence was taken care of by the U. S. Army and no reference to it is made in this report. There were no deductions on the salaries of foremen, etc., for subsistence. Each man paid his board bill at the end of every month to the Army.

Control work on the project had to be discontinued about March 12, due to the dry weather and the danger from burning. This left 1600 acres uncontrolled on which there are 446 trees. The area left lies on the extreme western side of the project and is made up of marginal type timber lands.

METHOD OF DISTRIBUTING COSTS

As there are no definite instructions available as to the method of figuring costs of enrolled men we have set an arbitrary figure of \$1.50 per man day.

Transportation is figured on the mileage at the standard rate for rental of equipment. This involves transportation of enrolled men only. The rental of a light car for the use of spotters is included in the spotting costs.

The salary of the Camp Superintendent is of course distributed over various projects. It is felt that 50% of his salary should be charged against insect control and should show as supervision. Of the saw filer's wages, 50% is charged against the project costs and shows under "Miscellaneous".

Figuring all costs in the above manner, the distribution is as follows:

SPOTTING RESULTS

Ownership	Approx. No. of trees	Approx. Volume	Acres
U. S.	792	691,480 B.F.	6,010
Pickering	1,814	1,795,440 B.F.	9,480
Red River	80	78,240 B.F.	240
Others	-	-	270
Grand Totals	2,686	2,565,160 B.F.	16,000

Trees per man day (treating) - - - - - .78

Acres " " (spotting) - - - - - .080 approx.

Trees " " (spotting) - - - - - 9.8

TREATING RESULTS

Ownership	Approx. No. of trees	Approx. Volume	Acres
U. S.	654	554,920 B.F.	5,410
Pickering	1,528	1,470,590 B.F.	8,480
Red River	80	78,240 B.F.	240
Others	-	-	270
Grand Totals	2,260	2,111,750 B.F.	14,400

APPROXIMATE AVERAGE COSTS

Per tree Spotted - - - - - .61

" M.B.F. - - - - - .64

" Acre - - - - - .102

" Man day - - - - - \$5.98

Per tree treated - - - - - 4.08

" M.B.F. - - - - - 4.33

" Acre - - - - - .635

" Man day, Total - - - - - 2.28-

COST DISTRIBUTION

	GROSS	MAN DAY	COST PER MAN DAY
SUPERVISION	1,396.50	235 $\frac{1}{2}$	5.93
SPOTTING (including transportation of Spotters)	1,640.48	274	5.93
LABOR (Enrolled men)	5,170.50	3,447	1.50
TRANSPORTATION (Enrolled men)	345.11	-	.10
MISCELLANEOUS	604.92	60	10.08
	9,157.51	4016 $\frac{1}{2}$	2.28

BEETLE CONTROL PROJECT

MODOC NATIONAL FOREST

SEASON - 1933-34

Legend

	Original NIRA Project Boundary
	Complete NIRA Project Boundary
	E.C.W. Project Boundary
	Pickering Lbr Co
	Red River Lbr Co
	Others
	Government

